Gender differences in drivers’
reported behaviors

International comparison based on
ESRA2 data on 32 countries

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Gender differences in road risks

3 time more men than women die in road traffic fatalities worldwide.

Sex ratio in road crashes reflects a difference in risk exposure, but risk-taking and traffic violations better explain gender differences in fatal road crashes than mileage driven.

Women anticipate more negative and serious consequences and less pleasure in risky behavior.

Men perceive fewer risks, report a higher probability of engagement, rate their driving skills more positively, feel safer behind the wheel and use driving to increase their sense of self-efficacy more than women.
Possible explanations

**Biological differences**
- Males -> **andro gens** -> sensation-seeking -> risk takings

**Evolution**
- Male needs to **reproduce** their genes and **protect** the community + female need to **select the best genitor**
  - -> men's risk-taking, aggression, competition or infidelity

**Social psychology**
- gender **stereotypes** and gender **roles**: social beliefs about what it means to be a man or a woman in a given society vary across **cultures**
  - male and female drivers’ expected behaviors could also vary across countries and cultures

**Crossroads of biological and social explanations**
- biological and social origins - **innate and acquired** - of gender differences in risk-taking
- **male sex**: high level of androgens, a lower effect of alcohol and a slower neurocognitive development
- **masculine psychosocial gender role**: cultural, social and individual value to risk-taking, aggressiveness, competition and alcohol consumption; greater exposure in terms of driving frequency
Objectives

Objective: explore gender differences in crash risk behaviors reported by drivers in different geographical and cultural contexts

Hypothesis: gender differences in risk behaviors among drivers are linked to culturally constructed gender roles and stereotypes, and vary according to cultural contexts.
## Method

### ESRA project (E-Survey of Road users' Attitudes)

- **joint initiative** of road safety institutes, research organizations, public services and private sponsors, across 46 countries
- aiming at **collecting comparable (inter)national data** on road users’ opinions, attitudes and behavior with respect to road traffic risks
- **ESRA1**: 3 waves between 2015 and 2017; almost 40,000 road users in 38 countries across 5 continents
- **ESRA2**: 32 countries involved in wave 1 (2018)

### Questionnaire

- several dimensions of the **individual behavior and beliefs**
- several **road safety issues**
- All information on the questionnaire is available on [www.esranet.eu](http://www.esranet.eu)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>ESRA1</th>
<th>ESRA2</th>
</tr>
</thead>
<tbody>
<tr>
<td>support for road safety policy measures</td>
<td>self-reported behaviour in traffic</td>
<td>acceptability of safe and unsafe traffic behaviour</td>
</tr>
<tr>
<td>attitudes, towards safe and unsafe traffic behaviour</td>
<td>subjective safety and risk perception</td>
<td>involvement in road crashes</td>
</tr>
<tr>
<td>enforcement of traffic laws</td>
<td>vehicle automation (new)</td>
<td>2 bonus questions (new)</td>
</tr>
</tbody>
</table>

- **2 bonus questions** (new)
**Procedure and sample**

**Self-administered questionnaire**
- Online questionnaire
- Representative sample of the national adult population in each country

**Conducted in**
- **32 countries** in November and December 2018:
  - More than 35,000 road users
  - Six age groups: 18-24y, 25-34y, 35-44y, 45-54y, 55-64y, 65y+

**Participating countries**
- **Europe (Europe20)**: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Poland, Portugal, Serbia, Slovenia, Spain, Sweden, Switzerland, United Kingdom;
- **America (NorthAmerica2)**: Canada, USA;
- **Asia and Oceania (AsiaOceania5)**: Australia, India, Israel, Japan, Republic of Korea;
- **Africa (Africa5)**: Egypt, Kenya, Morocco, Nigeria, South Africa

This four regions will be used to distinguish potential cultural differences.

**Focus only on participants reporting driving, at least a few days a month during the past 12 months.**

- 25,459 individuals: **13,540 males** (53.18% of the sample) and **11,919 females** (46.82% of the sample) equally distributed in the four regions studied
Analysis

Four crash-risk behaviors addressed
- driving under the influence of alcohol,
- excessive speed outside built-up areas,
- non-use of safety belt
- mobile phone use while driving

For each of these violations, participants are asked about
- their behavior in the past,
- the social acceptability of the behavior
- the personal acceptability of the behavior

Three-way analysis of variance (ANOVA)
- two gender groups (males and females),
- four regional groups (Europe20, North America2, Asia-Oceania5 and Africa5)
- six age groups (18-24, 25-34, 35-44, 45-54, 55-64, 65+).
**Drinking & driving**

Males declared more drinking and driving than females *in all regions*, but frequency among males is lower and closer to that of females for AsiaOceania5 compared to the other regions.

Males perceived higher social acceptability for drinking and driving than females in AsiaOceania5, Europe20 and NorthAmerica2 *but not in Africa5*, where both males and females declared high social acceptability of drinking and driving.

Males perceived higher personal acceptability for drinking and driving than females *in all regions*. Personal acceptability for drinking and driving is lower for males in AsiaOceania5 than in the other regions.
Excessive speed

**males declared more** speeding than females **in all regions**, with speeding more frequent in western regions (Europe20 and NorthAmerica2)

**males perceived higher social acceptability** for speeding than females in AsiaOceania5, Europe20 and NorthAmerica2 **but not in Africa5**, where both males and females declared low social acceptability of speeding

**males perceived higher personal acceptability** for speeding than females **in all regions**, but gender difference is smaller and personal acceptability for speeding is lower in Africa5
Not wearing seatbelt

- Males declared driving more often without a seatbelt than females in Africa5, Europe20 and NorthAmerica2, but not in AsiaOceania5, and that the frequency for not wearing a seatbelt is higher for both genders in Africa5.

- Males perceived higher social acceptability for not wearing a seatbelt than females in all regions. Social acceptability for not wearing a seatbelt is higher in Africa5 than in AsiaOceania5, Europe20 and NorthAmerica2.

- Males perceived higher personal acceptability for not wearing a seatbelt than females in all regions. Personal acceptability for not wearing a seatbelt is lower in AsiaOceania5. Gender difference is smaller in Africa5 and AsiaOceania5 than in western regions.
Talking on a hand-held phone while driving

**males declared more** often using a hand-held phone than females in Europe20, AsiaOceania5 and Africa5 **but not in NorthAmerica2**. Both genders declared higher frequency in Africa5 than in the three other regions.

**males declared higher social acceptability** for talking on a hand-held phone while driving than females in AsiaOceania5, Europe20 and NorthAmerica2 **but not in Africa5**, where both genders declared very high social acceptability.

**males declared higher personal acceptability** for making a phone call while driving than females in AsiaOceania5, Europe20 and NorthAmerica2, **but not in Africa5**. Personal acceptability is higher in Africa5 and NorthAmerica2 than in AsiaOceania5 and Europe20.
Objective: analyze the gender differences variation in crash risk behaviors in different geographical and cultural contexts, using the ESRA2_2018 data

Discussion

Gender differences

- Vary by region
  - Gender differences are socially constructed, according to cultural values
  - Higher levels of violation and acceptability for men in all regions
  - Gender differences are also partly common across cultures
  - Double risk factor among males
  - Biological sex AND social and cultural gender

Speed violation

- Behavior the most reported and the most acceptable (both socially and personally)
- By all male groups in all regions, but also by female groups except for Africa5
- Speeding appears to be a widespread and globally accepted violation for both men and women
Conclusion

Gender differences vary across cultures but, in all regions observed, men value crash risk behaviors more than women do.

**Speeding** appears to be a widespread and globally accepted violation for both men and women.

Targeting men and the dangerousness of speeding in communication campaigns on prevention, and road safety education.

Understand why higher risk-taking among men appear to be invariant across cultures. Exploring the differences by countries.
THANK YOU